Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

hippocampus - non-major biology - Darwinian Evolution

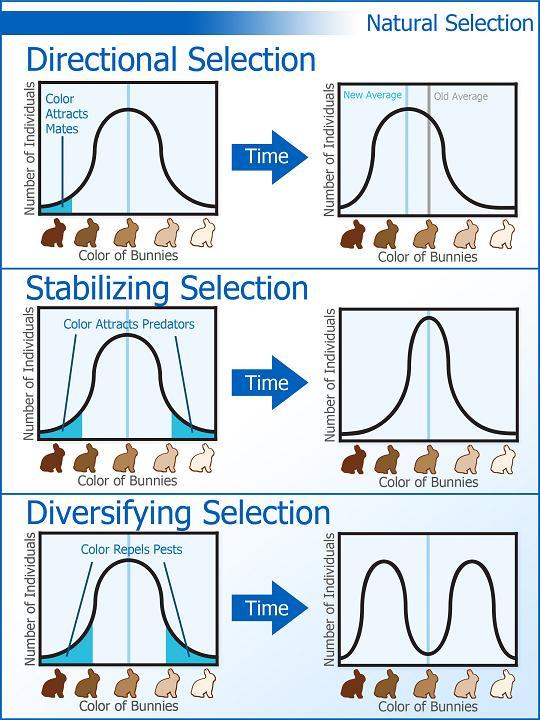
Charles Darwin, an unassuming British naturalist, is commonly credited as the discoverer of evolution. His theory was indeed elegant and powerful, and it is still the underpinning of modern biology. However, his ideas, like all scientific breakthroughs, relied heavily on the work of other scientists.

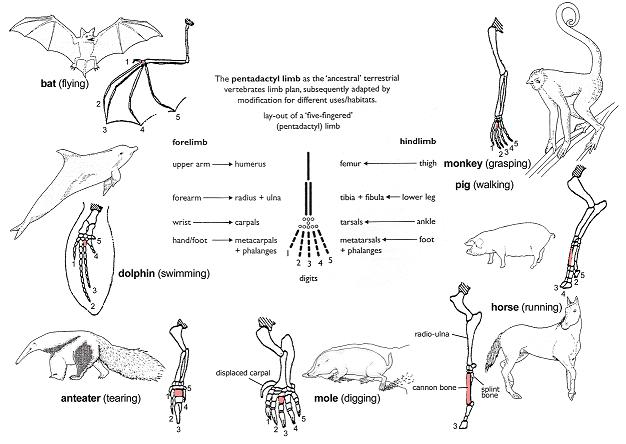
The heart of Darwin’s work and most enduring legacy is the idea that the diversity of life on earth is a result of evolution by natural selection.

***Natural Selection***

Natural selection is a process that takes place in populations of organisms over time. It is based on several features of populations:

Organisms that possess favorable traits are more likely to reproduce than organisms that lack those traits. As a result, those favorable traits are more likely to be inherited by the next generation than unfavorable traits.

Over time and many generations, the favorable traits will become more and more common. The result is a population better adapted to its environment than its forebears.



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*Darwin recognized that organisms that share homologous structures – structures arising from the same embryonic source – inherited those features from a common ancestor. The varied limbs of four-legged animals are homologous – all are derived from a 5-fingered ancestral limb that has been highly modified by natural selection*

*Natural selection changes the frequency of the forms of a trait in a population. It occurs when one form of a trait either helps or hurts an individual’s chances of reproducing. In these examples, the range of coat colors seen in bunnies changes over several generations as beneficial colors become more common and harmful colors become more rare*